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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,854	11/04/2003	Sung-Su Jung	8734.249.00 US	5752

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MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER	
LIN, JAMES	
ART UNIT	PAPER NUMBER
1762	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,854	JUNG ET AL.	
	Examiner.	Art Unit	
	Jimmy Lin	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *1-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/19/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 10-16 in the reply filed on 2/9/2007 is acknowledged.

2. Claims 1-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/9/2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 10-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (hereafter, AAPA) in view of Hashimoto et al. (U.S. Publication No. 2001/0013920)

Claims 10-11: AAPA teaches that an aligning substrate can be used to adjust the gap between the substrate and a plurality of syringes when making a liquid crystal display (LCD). The aligning substrate is loaded onto a table, and the syringes are lowered so that the nozzles just come into contact with the surface of the aligning substrate. The nozzles are raised to a

predetermined height above the surface of the aligning substrate to thereby obtain a desired gap between the aligning substrate and the syringes. Then, the aligning substrate is unloaded, a substrate on which a seal pattern is to be formed is loaded on the table, and a seal pattern is formed on the substrate [0016].

AAPA does not explicitly teach that the aligning substrate is attached to the table. However, Hashimoto teaches a method of making an LCD substrate, wherein the substrate can be placed into a deposition chamber with a vacuum sucking table. The substrate is fixed on the table by vacuum suction [0055]. The substrate is interpreted to be attached to the table by vacuum suction. Loading of the aligning substrate can also be fixed on the table by such vacuum suction. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a vacuum sucking table in the method of making the LCD of AAPA with a reasonable expectation of success because Hashimoto teaches that such a table is operable when making an LCD. Additionally, to have vacuum sucked the dummy substrate to the table would have been an obvious modification. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Regarding the limitation of "providing a substrate adjacent to the aligning substrate", AAPA teaches that a subsequent substrate is provided after the aligning substrate is unloaded. The substrate and the aligning substrate can be interpreted to be adjacent regardless of the distance between them because the term "adjacent" is a relative term. In this case, the term is not given any patentable weight.

Claim 12: AAPA does not explicitly teach that the dispensing includes dispensing of a liquid crystal. However, Hashimoto teaches that dispensing liquid crystal from a syringe is well known in the art [0050]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have dispensed liquid crystals from the syringe of AAPA with a reasonable expectation of success because Hashimoto teaches that syringes are operable for dispensing such materials onto an LCD substrate.

Claims 14-15: AAPA teaches the alignment of syringes using the aligning substrate. Material is applied to the aligning substrate through the syringes. An image camera detects the alignment patterns and the position of the syringes are aligned according to the image [0016].

AAPA does not explicitly teach that the aligning substrate is attached to the table. However, Hashimoto teaches that such is obvious, as discussed above.

Claim 16: AAPA does not explicitly teach cleaning the aligning substrate after the syringes are raised to have a desired gap between the aligning substrate and the nozzles. However, cleaning the aligning substrate would have extended the life and use of the aligning substrate. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to have cleaned the aligning substrate. One would have been motivated to do so in order to have extended the lifetime of the aligning substrate and to have reduced production costs.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Hashimoto '920 as applied to claim 10 above, and further in view of Hashimoto et al. (U.S. Publication No. 2003/0083203).

AAPA and Hashimoto '920 are discussed above, but do not explicitly teach that silver is dispensed from the syringe. However, Hashimoto '203 teaches that conductive fine particles, such as silver, can be dropped onto an LCD substrate from a nozzle [0102]-[0104]. The silver is dropped on the outer edges of the image display to prevent breaks and short circuits ([0191]-0195]; Fig. 8). AAPA teaches that materials can be deposited onto an LCD substrate by dropping the materials through the nozzle of a syringe. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have connected the upper and lower substrates of AAPA using the silver dots of Hashimoto '203 in order to have prevented breaks and short circuits. Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention to have dropped the silver dots onto the LCD substrate using the syringe of AAPA because AAPA teaches that such syringes have nozzles that are operable for dropping material onto an LCD substrate. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 10-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 19 and 23 of copending Application No. 10/824585 in view of Hashimoto '920. Claim 19 of '585 is directed to forming a seal pattern with a syringe and claim 23 of '585 is directed to contacting an alignment plate attached to a table in order to form a desired gap between the nozzle and alignment plate. Claim 10 of the present application is merely a combination of claims 19 and 23 of '585, except that it does not limit the deposition of the sealant onto an LCD substrate. However, Hashimoto '920 teaches that it was well known to use a dispenser method to form a sealant onto an LCD substrate (abstract; [0046]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used the claimed method of '585 to form a sealant on an LCD substrate because Hashimoto '920 teaches that using a dispenser (i.e., a syringe) to form a sealant layer is operable for forming an LCD substrate.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JL

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KEITH HENDRICKS
PRIMARY EXAMINER